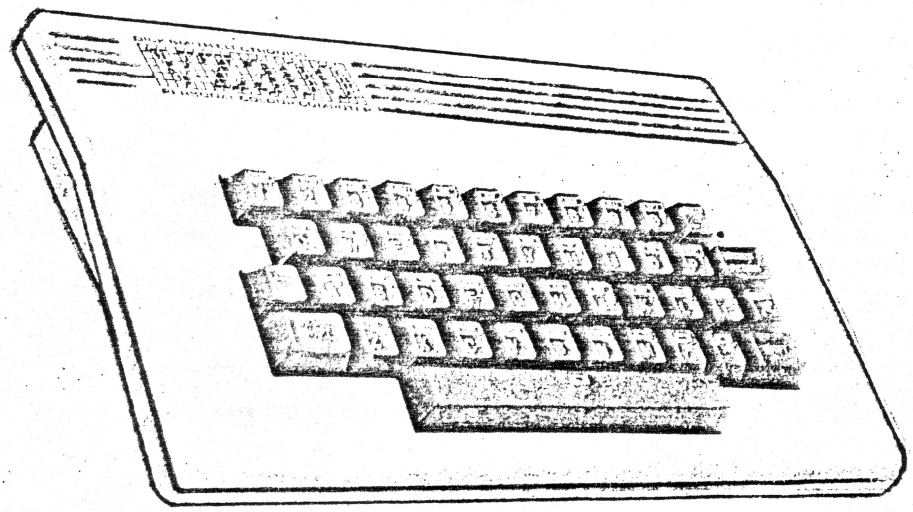
VZ-LINK

NEWSLETTER



AUCKLAND VZ 300 / 200
COMPUTER USERS CLUB
P.O BOX 1972 c.p.o

ISSUE No: 6 MARCH 87

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CONTRIBUTIONS

The following points will help those thinking of sending program's for publication in this newsletter.

If possible send a listing and a tape of your program. This helps me prepare the newsletter and the tape will be returned when I have finished.

Include some notes on what the program does and how to use it.
What is painfully obvious to the author is often obscure to we users.

For long or complex program's let me know if I can supply readers with a copy of it on tape or if you are prepared to do this yourself.
I urgently require program's and items for this newsletter.

Membership $10-00 per year for 12 issues

POSTAL ADDRESS

P.O Box 1972 C.P.O AUCKLAND...

NEWS & VIEWS MARCH 87.

There are six new VZ 390 programs arriving in the Dick Smith stores soon (or they should be).
The titles are:

(1) Penguim.
(2) Crash.
(3) Pharaohs Curse.
(4) Math's Armada.
(5) Word Matching Game.

I have managed to get copies of the first two and believe me they are good.
I am writing reviews for the first two at the moment and they should be finished soon.

In April I hope to visit Christchurch and attend one of the CHCH users meetings. I also hope to meet some of the other users and visit the D.SE store.

I am after copies of the old Auckland club newsletter "XILOG". If anyone has copies available please let me know.
I know this newsletter is particularly short of items such as tips, notes and programs.
Tips,notes on the VZ are both interesting to other reader's and help to fill gaps.
There must be some of you who feel that they are not advanced enough to contribute programs but that is not the case. Remember that no matter what your level of expertise, there are others with less who would find your programs and hints most helpful.

The corriespondence has been arriving thick and fast over the last week or two.

I received a letter from John D' Alton of V softwareZ thanking me for the review which I wrote on his book and software. He is willing to offer the club 20% discount on software purchases of $ A 100.00 or more, this is worth looking into, maybe a bulk order can be arranged . I think John's software is super.
Also I received a letter from K.R. Wright of Bombay (sth Ack) who sent me a program for " Antenna Standing wave ratio calculation". He also has a " Startrek " program on tape or disc, and he is willing to supply copies to members. Please contact me for further details.

Norman is now the computer services/ product specialist for Dick Smith's Auckland and can be reached at the Commerce Street Auckland Store.

The following addresses may be of use to users.

VsoftwareZ & Le,VZ oop 39 Agnes St Toowong 4066	VZ Down under C/- George Seggie P.O. Box 316 St Kilda 3182
Ad Lib Veezed Micro 13 Brooks St Biggenden 4621	Hunter Valley VZ users group P.O. Box 161 Jesmond 2299

As you can see we have a new cover and name for the newsletter, I hope it meets with members approval.

I have called the newsletter LINK as that is the whole object of it,to link as many VZ users together and keep the Vz alive and well and computing in New Zealand.

My thanks to peter Patterson who has supplied me with a number of program's with i will put in to the newsletter soon.Peter has also given me copies of 'XILOG' #7&8 .

Thanks also to Stu HOE who has a vast technical knowledge on the VZ. WE look forward to some items written by stu?.

MARK HARWOODS ADDRESS IS P.O BOX 154 DURAL 2158 N.S.W AUSTRALIA ..

"LASERLINK"
introduces 24 "NEW"
commands for your VZ

Replace your old ROM
with our new EPROM
$35.00

NO LOSS OF RAM!

No loader routines, No machine code calls. The 24 commands are available from "power up"

TRON	TROFF	RANDOM	ON	RESUME
AUTO	DEFINT	DEFSNG	DEFDBL	DEFSTR
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FRE	FIX	POS	CSNG	CINT
ERROR	CDBL	MEM	ON ERROR	

BONUS INSTRUCTION PROGRAM
AND DOCUMENTS

Contact the Agent in your State:-

W.A. Bruce Dudley	(09)	402 1119
S.A. Dave Boyce	(08)	394 6574
VIC. Chris Griffin	(03)	438 2153
VIC. Greame Meager	(054)	395 560
NSW. Gavin Williamson	(049)	621 678
NSW. Mark Harwood	(02)	651 1413

QLD. To be advised (anyone interested, please call Gavin).

*NOTE : If you are not thoroughly compentent with a soldering iron, State Agents charge only $10 for installation.

REVIEW OF D.S.E PROGRAM'S.
CRASH AND PENGUIN.

Firstly let me point out that these games are marked for the VZ 300 + 16k.

Crash.

The aim of crash is to drive around a maze type track and collect all the dots.

You must avoid a collision with the other car or cars by constantly changing lanes.

The crash car will always try and change into your lane to hit you.

Watch these crash cars as they are very tricky and they move fast.

You are able to increase speed and move sideways to change lanes.

The game is over after you crash or when you run out of fuel 4 times.

When you get to frame 3 there are two crash cars to avoid and the game is even harder to play.

The instructions are easy to follow and understand. The sound is fair.

Penguin.

The aim of Penguin is to kill the ice monsters by crushing them with sliding blocks of ice. You can make a block slide by positioning your man facing the block and then give it a push. It will slide in the direction pushed until it reaches another block or the side of the screen.

If the block of ice can not slide at all when you push, it will crumble.

Some monsters have the ability to make blocks crumble, but the monsters can't make the blocks slide.

If the monsters touch you, you are dead.

Once all the blocks are gone or you run out of time you are dead. You have 4 men to start with.

Summary both games.

Both these games are good, they make good use of the VZ graphic's and have good on screen (mode(1)) scoring.
This scoring gives you not only the score but time and number men/ cars left, it also gives you the top score.

Maybe D.S.E are moving away from space type games? Lets hope they are not moving towards the racing car type.
I would rather play crash than formula one. But then I would rather play penguin than crash so I can't win the " which program/ game" battle anyway.
It is a shame that we can't see a few more utility program's just to show new VZ owners that their VZis not just a games computer.

REVIEW OF SPACERAM

In space ram you are trapped in a alien space grid .You have to destroy all the enemy ram ships before your time run's out.
Aliens can destroy you by ramming your ship,or by activating a timebomb ship or releasing a clone ship.
If a time bomb ship is active then a count down clock will appear in the middle of the top row of your screen.You must destroy the timebomb ship before the clock reaches zero.
A clone ship looks identical to you and must be avoided at all cost. Destroying a clone ship will also destroy you, so watch out.

You can destroy the aliens by hitting them with your missiles. Only one missile can be active at any one time so you can't use continuous fire to win this game.
Note You have to decelerate before you can go in the reverse direction.
As the frames increase so do the number of aliens and the speed the aliens travel at.

SUMMARY

SpaceRam is a fast moving game which you will enjoy playing. The VZ graphics are not used to their full potential.
This does not deter from the game ,which has really clear instructions and Hi res on screen scoring.
I especially liked the way a hit was indicated with a graphics and sound display. a very good effect.The space theme again surface's but this game could of been marketed with a different scenario. All That would really be needed is to change the graphics character's.a
A good program to play and worth the cost ,which by the way is only $9.95 ie $10,00 dollar's less than the first group of VZ programs I wonder why the drop in price ? . Not that i'am complaining..

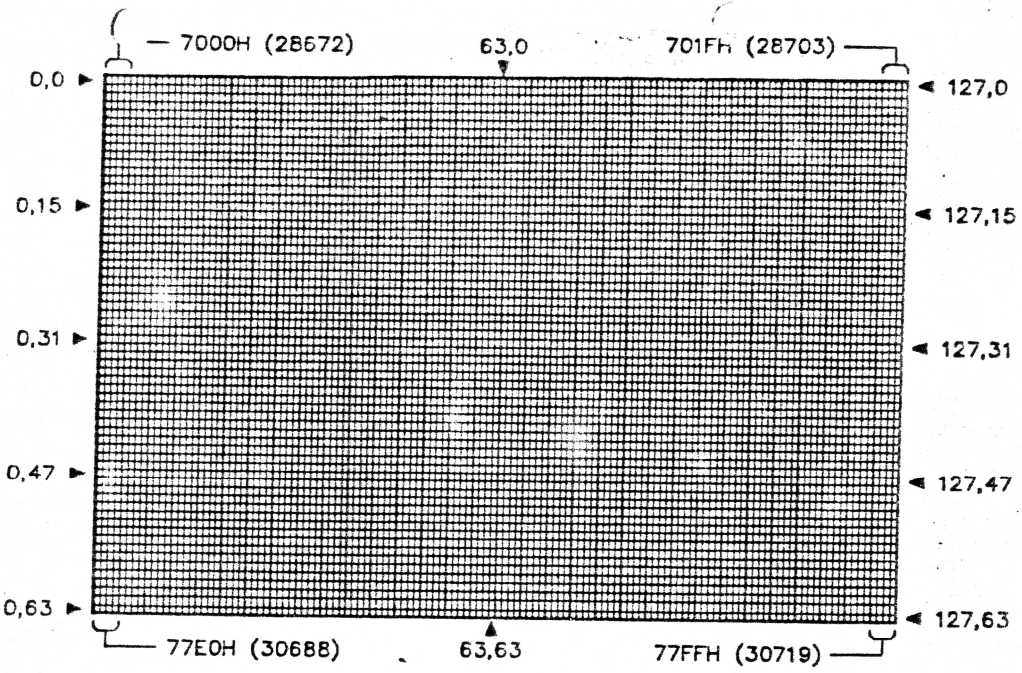

Figure 8. Screen Addressing for MODE (1) or hi-res displays on the VZ computers. This mode corresponds to Colour Graphics 2 on the VDG and is 128 by 64 elements in size. Each element is mapped with two bits.

In summary, for Semigraphics mode it can be seen that each of the four least significant bits controls one of the quadrants, whilst the next three bits determine the colour of the illumination. The most significant bit is set high to indicate a graphics block is encoded.

b7	b6	b5	b4	b3	b2	b1	b0
graphic *A/S	colour			G3	G2	G1	G0

In this mode, although the screen is formatted into 32 by 16 graphics blocks, in fact the quadrant resolution is actually 64 by 32 and with all of the eight colours available. This may be thought of as an intermediate resolution display mode.

Thus it can be seen that Alphanumerics in either Normal or Inverse style and Semigraphics blocks of up to eight colours can be individually set on the lo-res screen by byte mapping. Different forms of encoding the necessary information are used in each case. These features combine to make MODE(0) quite a powerful display despite its lack of resolution.

Hi-res/Graphics/Mode(1)

In hi-res or MODE(1), the screen has 128 by 64 elements individually addressable. This corresponds to 8192 elements and with only 2K of video RAM available, then some sort of trade-off in features over lo-res must ensue. In hi-res, each element is 2 by 3 pixels in size and is (noticeably) rectangular in shape. Video RAM addressing extends from 7000H (28672D) to 71FFH (30719D) — 2048 bytes as shown in Figure 8.

This mode corresponds to Colour Graphics Two (CG2) on the VDG chip. Each byte addresses four consecutive elements across the screen. Each element may be one-of-four colours (selected from either of the two colour sets). Note the trade-off in colours and the different way in which elements are addressed on the screen — such that MODE(0) and MODE(1) screens cannot be mixed.

There are a couple of ways in which each element may be illuminated.

The simplest (and slowest) way is by using the BASIC commands of SET and RESET. These commands alter two bits of the appropriate byte in the video RAM area. The processing is very slow because of this limitation and the fact that it is done through the BASIC interpreter. Listing 1 provides a simple illustration of this method. The program fills the entire screen with hi-res elements according to the COLOR command. The use of integer index variables speeds up the program a little.

LISTING 1

```
10 '***SNAIL GRAPHICS DEMO***
20 '***      HI-RES        ***
30 '***    VERSION 1.2     ***
40 '***  R.B.K.  22/5/86   ***
50 '*** EXECUTION TIME 43.7 SECS.
100 'SET TO HI-RES
120 MODE(1)
130 COLOR 3,0
140 SOUND 10,1
200 FOR V%=0 TO 63
210 FOR H%=0 TO 127
220 SET(H%,V%)
230 NEXT H%
240 NEXT V%
250 SOUND 10,1
260 STOP
270 END
```

LISTING 2

```
10 '***SNAIL GRAPHICS DEMO***
20 '***      HI-RES        ***
30 '***    VERSION 2.3     ***
40 '***  R.B.K.  22/5/86   ***
50 '*** EXECUTION TIME 8.3 SECS.
100 'SET TO HI-RES
120 MODE(1)
130 COLOR ,0
140 V%=170:SOUND 10,1
200 FOR I%=28672 TO 30719
210 POKE I%,V%
220 NEXT I%
250 SOUND 10,1
260 STOP
270 END
```

LISTING 3

```
10 '***NEAR-LIGHT-SPEED GRAPHICS DEMO***
20 '***          HI-RES            ***
30 '***        VERSION 1.2         ***
40 '***       R.B.K.  22/5/86      ***
50 '*** EXECUTION TIME 0.5 SECS.
100 '***LOAD BLOCK MOVE MACHINE CODE.***
110 FOR I%=-28687 TO -28674
120 READ A%: POKE I%,A%
130 NEXT
140 DATA 33,0,112,17,1,112,1,255,7,54,170,237,176,201
200 '***INITIALIZE USR() TO ADDRESS BFF1H OR -28687D.***
210 POKE 30862,241: POKE 30863,143
300 '***SET TO HI-RES.***
310 MODE(1)
320 COLOR ,0
330 SOUND 10,1
340 X=USR(0)
350 SOUND 10,1: SOUND 0,9
360 COLOR ,1
370 SOUND 10,1: SOUND 0,9
380 STOP
390 END
```

LISTING 4

```
10 '*****************************
20 '***  2000 VZ SCREENS  ***
30 '***    VERSION 1.2    ***
40 '***   R.E.K. 18/5/86  ***
50 '*****************************
60 '
100 '***FIND TOP OF MEMORY.
110 M1=PEEK(30898):L1=PEEK(30897):'***PRESERVE TOM POINTERS.
120 TM=M1*256+L1-20                 :'***RESERVE TOP 20 BYTES.
130 MS=INT(TM/256):LS=TM-MS*256
140 POKE 30898,MS:POKE 30897,LS
150 '
200 '***SET UP LOADING OF USR() ROUTINE.
210 TM=TM+1                         :'***NEXT ADDR IN RESERVED MEM.
220 MS=INT(TM/256):LS=TM-MS*256
230 POKE 30863,MS:POKE 30862,LS
240 AD=TM+10                        :'***ADDR. FOR CHARACTER BYTE.
250 IF TM>32767 THEN TM=TM-65536 :'***CONVERT TO SIGNED INTEGER.
260 IF AD>32767 THEN AD=AD-65536
270 '
300 '***LOAD MACHINE CODE.
310 FOR ID=TM TO TM+13
320   READ VL:POKE ID,VL
330 NEXT
340 '
400 '***Z-80 BLOCK MOVE SUBROUTINE.
410 DATA 33,0,112          :'LD HL,7000H   (#28672D START VIDEO RAM)
420 DATA 17,1,112          :'LD DE,7001H   (#28673D NEXT OR DEST.)
430 DATA 1,255,7           :'LD BC,07FFH   (#2047D SIZE OF VIDEO RAM)
440 DATA 54,85             :'LD (HL),55H   (#85D YELLOW OR CHAR."U")
450 DATA 237,176           :'LDIR          (BLOCK MOVE INSTRUCTION)
460 DATA 201               :'RET
470 '
500 '***INITIALIZE DELAYS - CONTROL SPEED OF EXECUTION BY D.
510 T=0        :'***TONE  0 IS REST.        RANGE IS 0 TO 31
520 D=4        :'***DURATION  9 IS LONG.    RANGE IS 1 TO 9
530 P=30744    :'***ADDR. FOR INVERSE CONTROL.
540 POKE P,0   :'***SET UP SCREEN.
550 '
600 '***SET UP DEMO LOOP.
610 FOR ID=0 TO 255
620   POKE AD,ID                    :'***SET CHARACTER BYTE.
630   '***SCREEN MESSAGE.
640   MODE(0)                       :'***SET A/G LO.
650   POKE P,0                      :'***SET INV LO.
660   PRINT@234," CHAR = ";ID:SOUND T,D
670   '***LO-RES SCREENS.
680   '***LO-RES GREEN CHARACTER ON BLACK BACKGROUND.
690   X=USR(0):COLOR,0:SOUND T,D:'***SET CSS LO.
700   '***LO-RES ORANGE CHARACTER ON BLACK BACKGROUND.
710   COLOR,1:SOUND T,D             :'***SET CSS HI.
720   POKE P,1                      :'***SET INV HI.
730   '***LO-RES BLACK CHARACTER ON GREEN BACKGROUND.
740   X=USR(0):COLOR,0:SOUND T,D:'***SET CSS LO.
750   '***LO-RES BLACK CHARACTER ON ORANGE BACKGROUND.
760   COLOR,1:SOUND T,D             :'***SET CSS HI.
770   '***HI-RES SCREENS.
780   MODE(1)                       :'***SET A/G HI.
790   POKE P,0                      :'***SET INV LO.
800   '***HI-RES COLOR SET 0 - GREEN SURROUND.
810   X=USR(0):COLOR,0:SOUND T,D:'***SET CSS LO.
820   '***HI-RES COLOR SET 1 - BUFF SURROUND.
830   COLOR,1:SOUND T,D             :'***SET CSS HI.
840   POKE P,1                      :'***SET INV HI.
850   '***HI-RES COLOR SET 0.
860   X=USR(0):COLOR,0:SOUND T,D:'***SET CSS LO.
870   '***HI-RES COLOR SET 1.
880   COLOR,1:SOUND T,D             :'***SET CSS HI.
890   '***RESET CONTROLS.
900   POKE P,0:COLOR,0:CLS
910 NEXT
920 '
930 '***RESET TOM POINTERS.
940 POKE 30898,M1:POKE 30897,L1
950 STOP:END
```

A quicker way is to POKE values into each byte, thereby setting four elements at a time. Listing 2 demonstrates this technique. This program also fills the entire hi-res screen with elements whose colours are determined by the variables V%.

The quickest way is to use a machine language program to load appropriate values into the video RAM. This technique is a very rapid way to fill the screen. Listing 3 is an example of this method. This program POKEs machine code into hi-memory. The subroutine uses the very efficient Z80 Block Move command to fill the screen according to the value stored at address -28677D. It is fast!

Both of the last two methods require that an understanding of the value to enter into RAM is known. This requires a knowledge of how each byte is organised in CG2 mode.

As mentioned previously, each byte controls four elements which can be selected from four colours. Bits are treated in pairs (dibits!) with each pair corresponding to an element. Each dibit can have a value of 00B to 11B to indicate colour. This is set out on Table 3.

Four example, suppose we want an entirely BLUE screen. Then POKE (128 + 32 + 8 + 2) or 170D into the appropriate area

TABLE 3:
CONFIGURATION OF BYTES IN MODE (1).

3	2	1	0	Element #	
0 0 0	0 0 0	0 0 0	0 0 0		Bin. = four GREEN/BUFF elements Dec. = 0D
0 1 64	0 1 16	0 1 4	0 1 1		Bin. = four YELLOW/CYAN elements Dec. = 85D
1 0 128	1 0 32	1 0 8	1 0 2		Bin. = four BLUE/MAGENTA elements Dec. = 170D
1 1 192	1 1 48	1 1 12	1 1 3		Bin. = four RED/ORANGE elements. Dec. = 255D

The decimal numbers corresponding to each element position AND colour provide the value that needs to be POKE'd or loaded.

of the screen. If, however, a striped screen consisting of RED-GREEN-BLUE-YELLOW vertical bands is required, then POKE (192 + 0 + 8 + 1) or 201D.

Although only four colours are available, there are two colour sets available. These are called by the COLOR command.

COLOR, 0 sets the background colour to green and the 'strong' colours of yellow, blue and red are available.

COLOR, 1 sets the background to buff and the 'pastels' colours of cyan, magenta and orange are available.

To think back to the RESET command mentioned before, it should be apparent that this command simply resets each dibit or element back to 00B, or the background colour.

Finale

Well there we have it! For those who have perservered thus far I have included Listing 4 which is entitled '2000 VZ Screens'. It is about as exciting as watching a Late Night Movie — and takes about as long to run! Actually it illustrates all of the features discussed in this article. For those who wish to sit-it-out — watch those control lines operate!

"I'm tired of your more-logical-than-thou attitude!"

****
COMMERCIAL SOFTWARE
for the DSE VZ200-300
COLOUR COMPUTER
****

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Spellomatic 1 & 2	DSE
Spellomatic 3 & 4	DSE
Flashcard 1 & 2	DSE
Flashcard 3 & 4	DSE
Metric Spycatcher	DSE
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Gamblers Pack	McC
Hi Jinks	McC
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Skiing	CAR
Target	CAR
Golf	CAR
Hangman	RHO
Flight Deck	VSW
Learjet	VSW
VZ Monopoly	VSW
Flying Saucer	VSW
Haunted Mansion	VSW
Mansion / Nova	VSW
Scotland Yard	VSW
Blackjack	VSW
Poker Machine	VSW
Word Squares	VSW
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Scotland Yard 2	VSW
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Ghoulbusters	CEL
Royal Poker	CEL
Thermonuclear War	CEL
Galactic Fighter	CEL
Lunar Landers 2020	CEL
Cataclysm Catarillar	CEL
Jailhouse Breakout	CEL
3-D Merciless Maze	CEL
Minotaur Periless	CEL
Battle Galaxy 7	CEL
Airlocks Maze	CEL
Reactor Destruction	CEL
Titanium Triology	CEL
Conan The Barbarian	CEL
Battle Of Vietnam	CEL
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Hangman	DSE
Slot Machine/Roulette	DSE
Blackjack	DSE
Circus	DSE
Biorythm	DSE
Invaders	DSE
Dynasty Derby	DSE
Learjet	DSE
Ghost Hunter	DSE
Hoppy	DSE
Super Snake	DSE
Knights & Dragons	DSE
Defence Penetrator	DSE
Star Blaster	DSE
Asteroids	DSE
Air Traffic Controller	DSE
Tennis	DSE
Checkers	DSE
Ladder Challenge	DSE
VZ - Panic	DSE
Planet Patrol	DSE
Othello	DSE
Draculas Castle	DSE
Backgammon	DSE
Attack Killer Tomato	DSE
Chess	DSE
Duel	DSE
Formula One	DSE
Kamakazi	DSE
Missile Attack	DSE
Dingout	DSE
Hamburger Sam	DSE
Lunar Lander [Laser]	DSE
Lunar Lander [VZ300]	DSE
Galaxon	DSE
Dawn Patrol	DSE
Tennis Golf lesson	DSE
Horse Rabbit Racing	DSE
Crash	DSE
Penguin	DSE
Space Ram	DSE
Poker	BJE
Circus	BJE
Invaders	BJE
Ghost Hunter	BJE
Hoppy	BJE
Super Snake	BJE
Knights & Dragons	BJE
Defence Penetrator	BJE
Star Blaster	BJE
Asteroids	BJE
Panic	BJE
Planet Patrol	BJE
Ladder Challenge	BJE
Learjet	BJE
Air Traffic Controller	BJE
Rally X	BJE
Checkers	BJE
Hangman	BJE
Blackjack	BJE
Golf Lesson	BJE
Tennis	BJE
Galazian Adventure	BJE
Snake	TAI
Snake Trap	TAI
Phantom Driver	TAI
Word Teaser	TAI
Ghostly Maze	TAI
Pattern Guess	TAI
Bright Idea	TAI
Cross Over	TAI
Snake Trails	TAI
Shark Bait	TAI
Grave Digger	TAI
Missile Safe	TAI
Three Hundred	TAI
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Hunter	TAI
Fighter	TAI
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Enervac	TAI
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The Lost Crown	APE
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Study Aid	LYS
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Financial Cashflow	DSE
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Matrix	DSE
Database	DSE
Word Processor	DAW
Data Master	DAW
Address Book	DAW
Super Word Processor	BRO

****
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****

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VZepson Print Patch	VSW
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Colour Graphics	PAM
VZ - Mon 80	LYS
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Disassembler	DSE
Editor Assembler	DSE
Sprit Generator	DSE
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Renumber Merge	WOB
Word Processor	DAW
Program Copier	SAR
VZ Debug	MIL
Graphics Pack	MIL
Retrieval Program	BRO
Copier	SUN

****
****
Software Companies Decoding
****

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LYS	Lysco
VSW	Vsoftwarez
CEL	Celestron
COS	Cosmic
DAW	L Dawson
HIR	John Hirst
McC	G Mcleary
MIL	R S Miller
LOW	B Low
CAR	Adam Carter
RHO	Chris Rhodes
PAM	Pam Software
TAI	Lee Tait
SAR	N Sarafoudis
LEH	G Lehman
WOB	W Obrist
BJE	S Bjelic
APE	APE Software Co
SOR	J L Sortland
SUN	E Sundstrup
BRO	G Browell

Total Software Advertised as at DECEMBER 1986
****

Some Software companies and writers have now closed or are distributing under other names.

J. D'alton is also VSOFTWAREZ

LYSCO [Leon Young Software] to stop selling VZ software as of 31 July 1986. But as yet no word of Who will take over sales and distribution

N. Sarafoudis also CELESTRON

COSMIC acquired by DSE

R. S. Miller closed down

This list is as complete as current information shows.

To prevent this software being lost to the future groups of VZ'ers, it would be an advantage to have a central library to hold a copy of these programs so that once the Distributor leaves the marketplace the Central Library would then be able to provide future clients with programs without contravening Copyright.

I have been forced to try and improve the supply and delivery of software orders as along with a number of other users the SERVICE from suppliers has been rather lax.

I would like to hear from any person who has either new or old software that is not listed here, And also from anyone who has copies of the lesser known programs.

I am prepared to act as a central distribution point for any software from the current suppliers, on the same terms as they advertise.

Any new products will only help to expand the usefulness of the VZ computer and any advice must contain Name and Address of Writer or Distributor so this catalogue can be updated

Any update or correction to the above listings please forward to :-

Eddie Tomes
3 Kilkenny st. Caralaba Qld. 4157
Telephone 07- 3902797

Compiled in July 1986 and updated December 1986

```
10 REM CHRISTMAS MUSIC BOX
20 REM CHRISTMAS 1985
30 REM INTRO
40 REM WRITE MERRY CHRISTMAS
44 MODE(1):FORG=4 TO 2 STEP -1:COLORG,1:RESTORE
46 FORT=1TO238
50 READ X:READ Y
60 SET(X,Y)
70 NEXTT
200 REM DRAW TREE
205 COLOR2,1
210 SET(14,2):SET(13,3):SET(15,3)
220 FORX=12TO16:SET(X,4):NEXT
230 FORX=11TO17:SET(X,5):NEXT
240 FORX=10TO18:SET(X,6):NEXT
250 FORX=12TO16:SET(X,7):NEXT
260 FORX=11TO17:SET(X,8):NEXT
270 FORX=10TO18:SET(X,9):NEXT
280 FORX= 9TO19:SET(X,10):NEXT
290 FORX= 8TO20:SET(X,11):NEXT
300 FORX=12TO16:SET(X,12):NEXT
310 FORX=11TO17:SET(X,13):NEXT
320 FORX=10TO18:SET(X,14):NEXT
330 FORX= 9TO19:SET(X,15):NEXT
340 FORX= 8TO20:SET(X,16):NEXT
350 FORX= 7TO21:SET(X,17):NEXT
360 FORX= 6TO22:SET(X,18):NEXT
370 FORX=12TO16:SET(X,19):NEXT
380 COLOR3,1
390 FORX=10TO18:SET(X,20):NEXT
400 FORX=11TO17:SET(X,21):NEXT
410 FORX=12TO16:SET(X,22):NEXT
1000 FORD=1 TO 1000:NEXTD
10000 REM DATA FOR WRITING MERRY CHRISTMAS
10010 DATA8,43,9,43,9,42,9,41,9,40,8,39,8,38,8,37,7,36,7,35,7,34
10020 DATA7,33,7,32,8,31,9,32,10,33,11,35,11,34,11,33,11,32
10030 DATA11,31,11,30,11,29,12,28,13,27,14,28,14,29,15,30,15,31
10040 DATA16,32,16,33,16,34,17,35,17,36,17,37,18,38,19,39,20,39
10050 DATA21,38,22,37,22,36,22,35,22,34,21,33,21,32,22,31,23,32
10060 DATA23,33,23,34,23,35,24,36,25,35,26,34,27,33,27,32,28,31
10070 DATA28,30,28,29,28,28,29,29,29,31,30,32,32,30,31,29,30,28
10080 DATA30,27,31,26,32,27,33,27,34,26,34,25,35,26,35,25,35,24
10090 DATA36,27,36,28,37,27,37,26,38,25,38,24,38,23,38,22,38,21
10100 DATA40,23,40,24,41,25,41,26,42,27,42,28,42,29,42,30,43,28
10110 DATA43,29,44,30,44,31,45,32,45,33,45,34,45,35,44,36,43,37
10120 DATA42,36,41,35,41,34,41,33,41,32,41,31,43,26,44,25,45,24
11010 DATA37,46,36,46,35,45,34,46,33,47,33,48,34,49,34,50,34,51
11020 DATA34,52,35,53,35,54,36,55,37,56,38,56,39,56,40,56,41,55
11030 DATA42,55,43,54,43,53,43,52,44,51,44,50,44,49,44,48,44,47
11040 DATA44,46,44,45,44,44,44,43,44,42,45,44,45,45,46,46,46,47
11050 DATA47,48,47,49,47,50,47,51,48,47,49,46,50,47,51,48,51,49
11060 DATA52,49,53,48,54,47,54,46,54,45,54,44,54,43,55,46,56,47
11070 DATA55,44,56,44,57,44,58,44,59,43,59,42,59,41,59,39,60,42
11080 DATA61,43,62,42,63,41,63,40,64,40,64,39,64,38,65,38,66,38
11090 DATA66,37,67,38,67,39,66,40,68,38,69,37,69,36,69,35,69,34
11100 DATA69,33,69,32,69,31,69,30,70,31,68,32,70,37,71,36,71,35
11110 DATA72,34,72,33,73,32,74,34,74,33,74,32,74,31,75,30,76,31
11120 DATA77,30,78,29,79,30,80,31,81,30,82,29,82,28,83,28,83,27
11130 DATA83,26,83,25,83,24,82,25,81,26,81,27,82,28,84,29,85,28
11140 DATA86,27,87,26,87,25,88,24,88,23,89,22,90,23,91,24,91,25
11150 DATA90,26,89,26
12000 NEXT G
15000 REM MUSIC
15100 SOUND21,1:26,2:26,1:28,1:26,1:25,1:23,2:19,2:23,2:COLOR,0
15110 SOUND28,2:28,1:30,1:28,1:26,1:25,2:21,2:21,2:COLOR,1
15120 SOUND30,2:30,1:31,1:30,1:28,1:26,2:23,2:21,2:23,2:28,2:25,2
15130 SOUND26,6
16000 REM FINAL DELAY
16010 FOR F=1 TO 2000:NEXT F
16020 GOTO44
```

This program is from the XILOG newsletter and writes, in handwriting style, 'MERRY CHRISTMAS' sloping across the screen. Then it draws a christmas tree and goes through a series of colour changes before it finally plays a familiar tune.

There are many possibilities as far as using this as a subroutine go. We'll leave that up to your imagination.

Dick Smith Electronics

Technical Bulletin

Fixing the printer bug in the VZ-editor assembler.

Below is a patch to enable your editor assembler to list its source code. As stated in the manual using option C.
First enter Insert mode by entering 'I'. Then set code origin by entering 'O'. Now type in the below program, pressing RETURN at the end of each line.

```
001        LD  BC,0CH      ;Size of transfer is 12 bytes.
002        LD  HL,LOOP     ;Point to new printer routine
003        LD  DE,8F54H    ;Point to editor assembler print out
004        LDIR            ;Transfer routine to editor assembler
005        JP  7B00H       ;Return control to editor assembler
006 LOOP   IN A,(00H)      ;Load printer status
007        BIT 0,A         ;Check ready bit
008        JR NZ,LOOP      ;Repeat LOOP if not ready
009        LD A,C          ;Load Accumalator with print data
010        OUT (0EH),A     ;Output data to printer port
011        OUT (0DH),A     ;Another port for an early interface
012        RET             ;Get next character
```

Now assemble the program by entering 'A'. Now RUN the program by entering 'R' then press 'Y' to verify you wish to execute the program. Finish up by deleteing the program by entering 'D#'. Your editor assembler may list programs now, just by selecting option 'C'.(enter 'SC').

Yours sincerly

Jamie PERRY